



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,991	07/14/2003	James Ziech	60680-602	5966
7590	12/14/2004		EXAMINER	
			LEWIS, TISHA D	
DYKEMA GOSSETT PLLC SUITE 300 39577 WOODWARD AVENUE BLOOMFIELD HILLS, MI 48304			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/618,991	ZIECH, JAMES
	Examiner	Art Unit
	TISHA D. LEWIS	3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) 23 is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____ .   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: ____ .                                   |

## **DETAILED ACTION**

The following is a first action on the merits of application serial no. 10/618,991 filed on July 14, 2003.

### ***Information Disclosure Statement***

The information disclosure statement filed on July 14, 2003 has been acknowledged.

### ***Election/Restrictions***

The restriction requirement has been withdrawn due to the invention of Group I encompassing the assembly of Group II.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "said pinion shaft" in line 5. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-20 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 02/099311 A2. Due to the WO document and present invention having the same reference characters and similar description, a step by step description of the rejection will not be needed.

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 6-10, 16, 17 and 20 are rejected under 35 U.S.C. 102(b) as being unpatentable by Schlosser et al ('889). As to claims 1, 7-10 and 16, Schlosser et al discloses a drive axle assembly for a tandem assembly having a differential carrier (26) with a forward and rear opening, the rear opening being large enough to insert a first gear (72), then inserting a pinion shaft (74) being coupled to the first gear, then inserting a second gear (46) in a bearing cup (via 56), then inserting a power divider (40) having a plurality of differential gears (44) to mesh with the second gear on a rearward side of the divider, then inserting a third gear (48) to mesh with the differential gears on a forward side of the divider.

As to claims 2 and 17, Schlosser et al discloses the carrier housing (26) being one piece.

As to claim 4, Schlosser et al discloses coupling a pinion gear (78) to the pinion shaft.

As to claims 6 and 20, Schlosser et al discloses an input shaft (30) inserted through a forward opening.

As to claim 21, Schlosser et al discloses, in combination with the components above, a radially extending flange at the rearward end for connection to an axle housing and a diameter of the forward opening being about equal to a diameter of a bearing cone (cap).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5, 11-15, 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schlosser et al in view of Glaze et al ('847). As to claims 5, 11 and 19, Schlosser et al discloses a clutch lock which can be inserted into the rear opening, but does not disclose a shift fork assembly for the clutch.

Glaze et al discloses an interaxle differential having a lock clutch member (220, 222) in the form of a shift fork assembly.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the clutch of Schlosser et al into a shift fork clutch in view of Glaze et al to reduce the amount of components needed to actuate the clutch (i.e., plate clutch uses multiple plates wherein shift clutch uses a collar).

As to claims 3, 13, 18 and 22, Schlosser et al discloses a forward and rear bearing support (76), but the first gear is not located therebetween or is there a second opening.

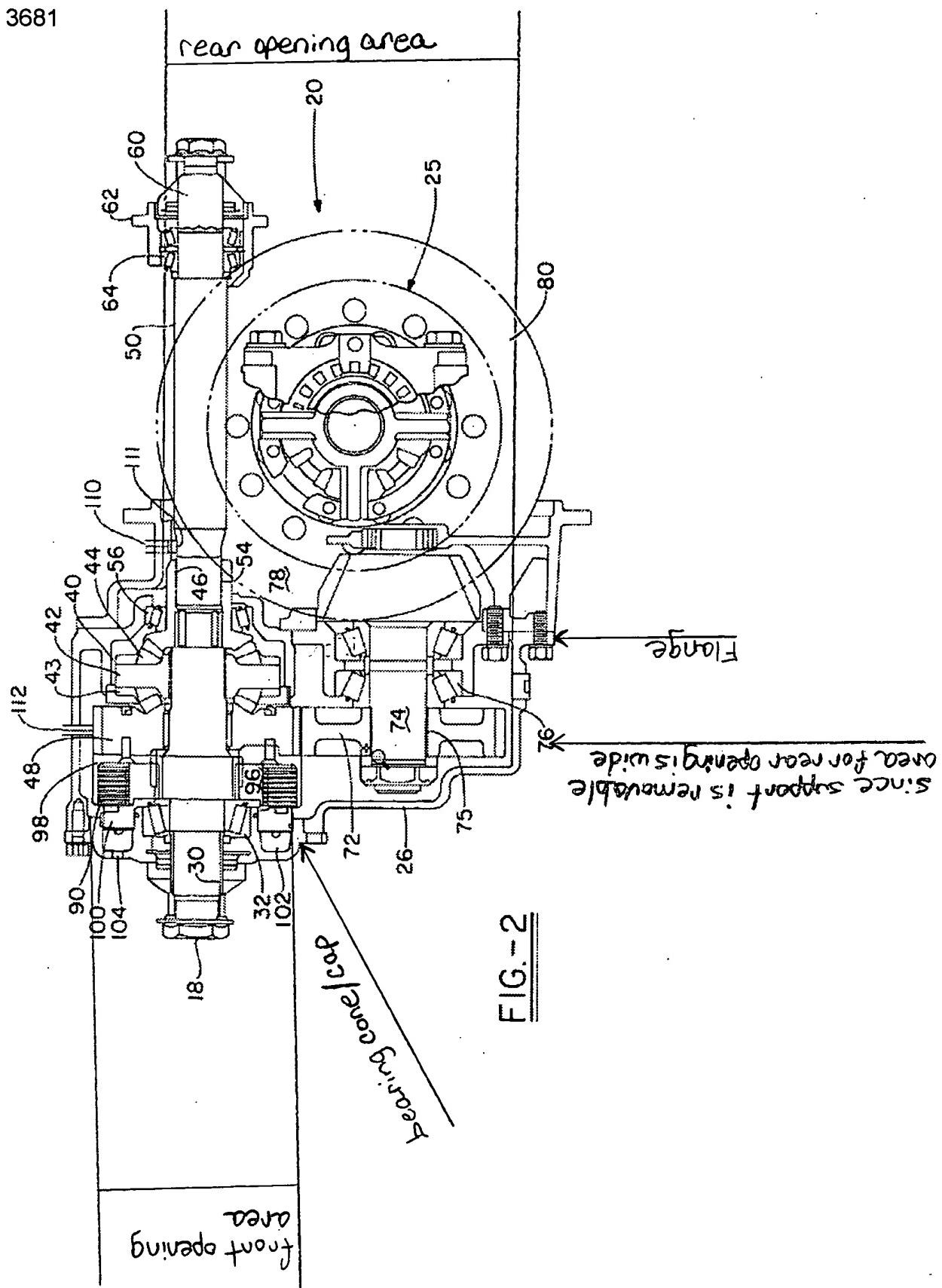
Glaze et al discloses a gear (284) for a pinion shaft (286) wherein the shaft is supported by forward and rear bearing supports (290, 302) on opposite sides of the gear and a second forward opening (via 315) is used for inserting the forward bearing support wherein a diameter of the opening is about equal to a diameter of a bearing cup supporting the bearings.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to mount the bearing supports of Schlosser et al on opposite ends of the pinion shaft in view of Glaze et al to directly support the pinion shaft at both ends.

As to claim 12, Schlosser et al discloses the carrier housing (26) being one piece.

As to claim 14, Schlosser et al discloses coupling a pinion gear (78) to the pinion shaft.

As to claims 15, Schlosser et al discloses an input shaft (30) inserted through a forward opening.



***Allowable Subject Matter***

Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**FACSIMILE TRANSMISSION**

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 872-9326 before final and 703-872-9327 after final**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to  
the Patent and Trademark Office (Fax No. (703) 000-0000) on \_\_\_\_\_  
(Date)

Typed or printed name of person signing this certificate:

---

---

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Art Unit: 3681

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Johansson ('840) and Vollmer ('711)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 703-305-0921. The examiner can normally be reached on M-Thur 8 AM TO 3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES A. MARMOR can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TdI  
December 10, 2004

*T. Lewis*  
TISHA LEWIS  
PRIMARY EXAMINER  
PL 3681 12/10/04